Filed: December 20, 2001

Title: LOW-TEMPERATURE GROWN HIGH QUALITY ULTRA-THIN CoTiO3 GATE DIELECTRICS

# **REMARKS**

Applicant has carefully reviewed and considered the Office Action mailed on May 30, 2003, and the references cited therewith.

Claims 14, 22, 30, 38, 43, 47, 51, 56, and 59 are amended, no claims are canceled, and no claims are added; as a result, claims 1-67 are now pending in this application.

#### §103 Rejection of the Claims

Claims 56-58 were rejected under 35 USC § 103(a) as being unpatentable over applicant's admitted prior art (AAPA) of this application in view of Yano et al. (U.S. '080) and Japan 2001332546A (JP '546A). Claims 59-60 were rejected under 35 USC § 103(a) as being unpatentable over applicant's admitted prior art (AAPA) of this application in view of Yano et al. (U.S. '080) and Japan 2001332546A (JP '546A). Claim 61 was rejected under 35 USC § 103(a) as being unpatentable over applicant's admitted prior art (AAPA) of this application in view of Yano et al. (U.S. '080) and Japan 2001332546A (JP '546A) as applied to claims 59 & 60 above, and further in view of remarks by the Examiner.

Yano appears to show an epitaxially grown crystalline buffer film of YSZ (yttria-stabilized zirconia). See column 7, lines 18-30. However, Yano does not show evaporation depositing a metal alloy layer on the body region wherein at least a portion of the alloy layer is amorphous. Yano, in fact, teaches away from amorphous regions.

In contrast, Applicant's independent claims 56 and 59 as amended include evaporation depositing a metal alloy layer on the body region wherein at least a portion of the alloy layer is amorphous. Applicant states in the present application on page 8, lines 6-11, "In one embodiment, the deposited material layer 320 is substantially amorphous. A lower presence of grain boundaries in the substantially amorphous material layer 320 reduces the leakage current through the final gate oxide."

Applicant respectfully submits that the additional reference of Japan 2001332546A (JP '546A) fails to cure the deficiencies of Yano as outlined above.

Because the cited references, either alone or in combination, do not show every element of Applicant's independent claims, a 35 USC § 103(a) rejection is not supported by the

AMENDMENT & RESPONSE UNDER 37 C.F.R. 1.116

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references. Reconsideration and withdrawal of the rejection is respectfully requested with respect to Applicant's independent claims 56 and 59. Additionally, reconsideration and withdrawal of the rejection is respectfully requested with respect to the remaining claims 57-58 and 60-61 that depend therefrom as depending on allowable base claims.

# Withdrawn claims

Applicant respectfully submits that generic claim 1, as indicated in the Restriction Requirement mailed on 8/21/2002, has been indicated as allowed. Consideration of species claims as indicated in the Restriction Requirement is respectfully requested under 37 CFR 1.141.

# Allowable Subject Matter

Claims 1-13, 55, & 62-67 were allowed. Applicant acknowledges and thanks the Examiner for indication of allowability of claims 1-13, 55, & 62-67.

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## Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 373-6944 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

KIE Y. AHN ET AL.

By their Representatives,

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Date 7-3/-03

By \_\_\_\_\_

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Name

Signature